

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A synchronous network, comprising:

nodes transmitting data to one another in a predefined sequence for a predefined duration, a plurality of said nodes outputting a synchronization signal defining a reference time for a synchronization of said nodes, said synchronization signal having a duration which is longer than a maximum signal transit time occurring inside the network; ~~and~~

a respective node of said nodes wishing to synchronize with one or more others of said nodes outputting the synchronization signal and further data which identifies said respective node in a time slot assigned to said respective node after outputting the synchronization signal or receiving the synchronization signal from another one of said nodes; and

said synchronization signal having at least one of a time profile and a duration that the synchronization signal can be identified as the synchronization signal even if other

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synchronization signals which are output by different ones of
said nodes are overlapping on one another.

Claim 2 (canceled)

Claim 3 (original): The network according to claim 1, wherein
the synchronization signal is encoded using one of an NRZ
code, a XERXES code, and a Manchester code.

Claim 4 (canceled).

Claim 5 (previously presented): A synchronous network,
comprising:

nodes transmitting data to one another in a predefined
sequence for a predefined duration, a plurality of said nodes
outputting a synchronization signal defining a reference time
for a synchronization of said nodes, said synchronization
signal having a duration which is longer than a maximum signal
transit time occurring inside the network, wherein a
respective node of said nodes wishing to synchronize with one
or more others of said nodes initially observes for a
predetermined time to determine whether another one of said
nodes is outputting the synchronization signal or other data,
and, if another one of said nodes is not outputting the

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synchronization signal or other data, said respective node
outputs the synchronization signal; and

said respective node wishing to synchronize with one or more
others of said nodes outputting further data which identifies
said respective node in a time slot assigned to said
respective node after outputting the synchronization signal or
receiving the synchronization signal from another one of said
nodes.

Claim 6 (previously presented): The network according to
claim 5, wherein said respective node wishing to synchronize
with one or more others of said nodes outputs the
synchronization signal during a synchronization phase only if
said respective node has detected that no other one of said
nodes is outputting the synchronization signal or other data.

Claim 7 (canceled)

Claim 8 (previously presented): The network according to
claim 5, wherein said respective node wishing to synchronize
with one or more of said nodes defines a chronological
position of time slots assigned to it as a function of the
synchronization signal which is output by said respective node

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or received by said respective node from another one of said nodes.

Claim 9 (original): The network according to claim 1, wherein the synchronization signal is output in a specific time slot of a time slot cycle used.

Claim 10 (original): The network according to claim 9, wherein the specific time slot is a global time slot in which all of said nodes are allowed to output specific signals and specific data.

Claim 11 (original): The network according to claim 1, wherein all of said nodes output the synchronization signal.

Claim 12 (previously presented): The network according to claim 5, wherein said respective node wishing to synchronize with one or more others of said nodes defines a chronological position of time slots assigned to it as a function of the synchronization signal which is output by said respective node or received by said respective node from another one of said nodes and as a function of received data which others of said nodes have output in their assigned time slots, in order to identify itself to others of said nodes.

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Claim 13 (previously presented): The network according to claim 5, wherein said respective node wishing to synchronize with one or more others of said nodes defines a chronological position of time slots assigned to it as a function of received data which others of said nodes have output in their assigned time slots, in order to identify itself to others of said nodes.

Claim 14 (previously presented): A synchronous network, comprising:

nodes transmitting data to one another in a predefined sequence for a predefined duration, a plurality of said nodes outputting a synchronization signal defining a reference time for a synchronization of said nodes; and

a respective node of said nodes wishing to synchronize with one or more others of said nodes initially observing for a predetermined time to determine whether another one of said nodes is outputting the synchronization signal or other data, and, if another one of said nodes is not outputting the synchronization signal or other data, said respective node outputting the synchronization signal and further data which identifies said respective node in a time slot assigned to said respective node after outputting the synchronization

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signal or receiving the synchronization signal from another
one of said nodes.

Claim 15 (canceled)